### भारतीय मानक Indian Standard

## वस्त्रादि — टेक-अप रोलर्स के लिए छिद्रित स्ट्रिप्स — विशिष्टि

IS 4438: 2023

( पहला पुनरीक्षण )

# Textiles — Perforated Strips for Take-Up Rollers — Specification

(First Revision)

ICS 59.120.30

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#### **FOREWORD**

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Textile Machinery and Accessories Sectional Committee had been approved by the Textiles Division Council.

This standard was revised in 1967. The standard has been revised to incorporate the following changes:

- a) Marking clause has been modified; and
- b) Sampling clause has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

#### Indian Standard

## TEXTILES — PERFORATED STRIPS FOR TAKE-UP ROLLERS — SPECIFICATION

(First Revision)

#### 1 SCOPE

This standard prescribes requirements of perforated steel strips (fillets) used for covering take-up rollers of plain looms.

#### 2 MANUFACTURE

#### 2.1 Material

Fillets shall be made from cold-rolled bright mild steel strips. The carbon content of the steel strip shall be 0.08 percent (*Max*).

#### 2.2 Workmanship and Manufacture

The strip should be punched to form holes all over the surface (*see* Fig. 1) in such a way that the edges of the holes protrude out of the surface of the strip making it rough. No hole shall cut the edge of strip on either side.

NOTE — If prescribed by the buyer, brass sheet may be used for the manufacture of fillets.

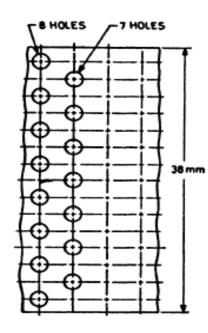


FIG. 1 STAGGERING OF 7/8 HOLES IN A FILLET

#### 2.3 Roughness of Fillet

The surface of the fillet should be rough to such an extent that it does not allow the woven cloth to slip over it (that is, it grips the cloth) and at the same time does not damage the cloth in any way.

#### 2.4 Finish

The fillet shall be given an anti-rust finish.

#### **3 REQUIREMENTS**

#### 3.1 Width

The width of the fillet shall be 38 mm.

#### 3.2 Thickness

The thickness of the strip shall be 0.150 mm to 0.213 mm (or 38 SWG to 35 SWG).

#### 3.3 Pattern

As agreed to between the buyer and the seller, the pattern of the fillet (staggering of holes) shall be 7/8, 9/10, 11/12, 16/17, 19/20 or 21/22. The staggering of holes in the fillet shall be as shown in Fig. 1.

- **3.3.1** 7/8 holes means that there are 7 holes in a line across the width of the fillet and in the adjacent line there are 8 holes staggered as shown in Fig. 1.
- **3.3.2** The number of holes across the width of the fillet depends upon the quality of the cloth to be woven. The number of holes and quality of cotton cloth is given below for the information and guidance of the buyer and the seller:

Sl No.	Pattern	Quality of Cloth
(1)	(2)	(3)
i)	7/8	Coarse
ii)	9/10, 11/12	Medium
iii)	16/17	Fine
iv)	19/20, 21/22	Superfine

**3.3.3** Diameter of holes and number of rows of holes per 5 cm along the length of the fillet in respect of various patterns should generally be as follows:

Sl No.	Pattern	Diameter of Hole, mm	Number of Rows/5 cm Along Length of Fillet
(1)	(2)	(3)	(4)
i)	7/8	1.2	12
ii)	8/9	1.2	16
iii)	9/10	0.8	16
iv)	11/12	0.8	22
v)	16/17	0.4	26
vi)	19/20	0.4	26
vii)	21/22	0.4	32

#### **4 SAMPLING**

#### 4.1 Lot

All the rolls of fillets of the same pattern and manufactured from the same kind of material delivered to a buyer against one despatch note shall constitute a lot.

- **4.2** The conformity of the lot to the requirements of this standard shall be determined on the basis of the tests carried out on the sample drawn from it.
- **4.3** Unless otherwise agreed to between the buyer and the seller, the number of rolls to be selected at random shall be according to col (2) and col (3) of Table 1.
- **4.4** The rolls selected according to **4.3** shall be tested for width, thickness and pattern.

#### 4.5 Criteria for Conformity

The lot shall be declared as conforming to the requirements of this standard, if the number of rolls found defective in respect of any one or more of the characteristics tested in **4.4** does not exceed the corresponding number given in col (4) of Table 1.

#### **5 MARKING**

- **5.1** Each roll of fillet (*see* **6.1**) shall be marked at an appropriate place with the following:
  - a) Pattern (see **3.3**);
  - b) Width and thickness;
  - c) Gross and net mass:
  - d) Lot/batch number: and
  - e) Manufacturer's name, initials or trademark.

#### 5.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

#### 6 PACKING

- **6.1** A length of 150 m of fillet shall be wrapped in the form of a roll. The roll shall then be oiled and wrapped with an inner layer of waterproof packing paper and finally with an outer layer of hessian.
- **6.1.1** The package shall bear the following information:
  - a) Length of the fillet;
  - b) Pattern; and
  - c) Name, initials or trade-mark of the manufacturer.

Table 1 Sample Size and Permissible Number of Non-conforming Rolls

(Clauses 4.3 and 4.5)

Sl No.	Number of Rolls in the Lot	Number of Rolls to be Selected	Permissible Number of Non-conforming Rolls
(1)	(2)	(3)	(4)
i)	Up to 150	8	1
ii)	151 to 280	13	1
iii)	281 to 500	20	2
iv)	501 and above	32	3

#### ANNEX A

(Foreword)

#### COMMITTEE COMPOSITION

Textile Machinery and Accessories Sectional Committee, TXD 14

Organization Representative(s)

Central Manufacturing Technology Institute, Bengaluru DR NAGAHANUMAIAN (Chairperson)

Amritlakshmi Machine Works, Mumbai Shri N. K. Brahmachari

SHRI N. K. RAUT (Alternate)

ATE Enterprises Private Limited, New Delhi Shri Abhijit Kulkarni

SHRI ANIL KUMAR SHARMA (Alternate)

Bajaj Industries Private Limited, Kolkata REPRESENTATIVE

Bhowmick Calculator, Kolkata Shri Goutam Bhowmick

SHRI VIVEKANANDA BHOWMICK (Alternate)

Central Manufacturing Technology Institute, Bengaluru SHRI B. R. MOHANRAJ

SHRI K. SARAVANAN (Alternate)

Confederation of Indian Textile Industry, New Delhi Shri Ajay Kumar

Dashmesh Jacquard and Powerloom Private Limited, Panipat Shri RAJMEET DHAMMU (Representative)

HLL Lifecare Limited, Noida Shri Akhil G. S.

SHRI RATNAKAR GUPTA (Alternate)

ICAR-Central Institute for Research on Cotton Technology,

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Dr T. Senthilkumar (Alternate)

India ITME Society, Mumbai Shri Prashant Mangukia

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Indian Jute Industries Research Association, Kolkata Shrimati Saumita Choudhury

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Indian Jute Mils Association, Kolkata REPRESENTATIVE

Indian Textile Accessories and Machinery Manufacturers SHRIM

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Kusters Calico Machinery Limited, Karjan Shri Devang Parikh

SHRI SHUBHASIS SUR (Alternate)

Lakshmi Machine Works Limited, Coimbatore MS KALPANA A.

MS DIVYA V. (Alternate)

Laxmi Shuttleless Looms Private Limited, Ahmedabad Shri Ketan Sanghvi

Ludlow Jute Limited, Kolkata REPRESENTATIVE

Organization

Representative(s)

Ministry of Heavy Industries and Public Enterprises, Department

of Heavy Industry, New Delhi

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SHRI S. SUNDAR (Alternate)

SHRI R. R. DEOGHARE (Alternate)

National Safety Council, Navi Mumbai

SHRI LALIT R. GABHANE

Office of the Textile Commissioner, Mumbai

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The Synthetic and Art Silk Mills Research Association, Mumbai

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#### **Amendments Issued Since Publication**

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